



WE CLAIM:

- 1. A monoclonal antibody which immunospecifically binds to an epitope of SSeCKS.
 - 2. The monoclonal antibody of claim 1 which binds to human SSeCKS.
- 3. The monoclonal antibody of claim 1 produced by the hybridoma cell line designated 94A3.
- 4. The monoclonal antibody of claim 1 produced by the hybridoma cell line designated 78H11.
- 5. The monoclonal antibody of claim 1 produced by the hybridoma cell line designated 82B3.
- 6. The monoclonal antibody of claim 1 produced by the hybridoma cell line designated 31A3.
- 7. A method for identifying a compound capable of modulating cell proliferation comprising:
 - (i) contacting a cell that comprises a reporter gene under the transcriptional control of a SSeCKS gene responsive element with a test compound and measuring the level of reporter gene expression in the cell;
 - (ii) measuring the level of reporter gene expression in the absence of the test compound; and
 - (iii) comparing the levels of reporter gene expression measured in (i)





and (ii);

wherein a difference in the levels of reporter gene expression measured in steps
(i) and (ii) has a positive correlation with cell proliferation modulating activity of the test compound.

- 8. The method of claim 7 wherein an increase in reporter gene activity correlates with the ability of the test compound to inhibit cell proliferation.
- 9. A method for identifying a compound capable of modulating cell proliferation comprising:
 - (i) contacting a cell that comprises a reporter gene under the transcriptional control of a cyclin D gene responsive element with a test compound and measuring the level of reporter gene expression in the cell;
 - (ii) measuring the level of reporter gene expression in the absence of the test compound; and
 - (iii) comparing the levels of reporter gene expression measured in (i) and (ii);

wherein a difference in the levels of reporter gene expression measured in steps
(i) and (ii) has a positive correlation with cell proliferation modulating activity of the test compound.

- 10. The method of claim 7, wherein the cell is a transformed cell.
- 11. The method of claim 10 wherein the cell is a ras or src transformed cell.





- 12. A method for identifying a compound capable of modulating hair growth comprising:
 - (i) contacting a cell that expresses cyclin D and SSeCKS, a in the presence of a stimulator of cell proliferation;
 - (ii) determining the level of nuclear translocation of the cyclin D into the nucleus of the cell;
 - (iii) determining the level of nuclear translocation in the absence of the test compound; and
 - (iv) comparing the level of nuclear translocation measured in (ii) and (iii);

wherein a difference in the level of nuclear translocation measured in steps (ii) and (iii) has a positive correlation with cell proliferation modulating activity of the test compound.

- 13. A method of inhibiting cell proliferation in a cell comprising introducing a nucleic acid molecule encoding a SSeCKS polypeptide that is capable of binding cyclin D and preventing translocation of cyclin D into the nucleus.
- 14. The method of claim 13 wherein the nucleic acid molecule further encodes a cytoskeletal anchoring peptide.
- 15. A method of inhibiting cell proliferation in a cell comprising introducing a nucleic acid molecule encoding a SSeCKS polypeptide that has an increased affinity for cyclin D.





- 16. A method for determining the metastatic potential of a cancer cell comprising:
 - (a) detecting the expression of SSeCKS in the cell; and
 - (b) comparing the level of SSeCKS expression in the cancer cell to the level of expression in a control sample;

wherein a decrease in the level of SSeCKS expression detected in the cancer cell as compared to the normal cell is an indicator of increased metastatic potential.

- 17. The method of claim 16 wherein the SSeCKS protein is detected using an immunoassay.
- 18. A method for determining the metastatic potential of a cancer cell comprising detecting the presence of a SSeCKS encoding nucleic acid in the cell; wherein a decrease or absence of SSeCKS encoding nucleic acid within the cell is an indicator of increased metastatic potential.
- 19. A method for modulating cell proliferation in a mammal comprising administering to the mammal a compound that prevents nuclear translocation of cyclin D.
- 20. A method for modulating hair growth in a mammal comprising administering to the mammal a compound that increases the expression of SSeCKS.